

PTO-1390 (Rev. 07-2005)

Approved for use through 03/31/2007. OMB 0651-0021

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| <b>TRANSMITTAL LETTER TO THE UNITED STATES<br/>DESIGNATED/ELECTED OFFICE (DO/EO/US)<br/>CONCERNING A SUBMISSION UNDER 35 U.S.C. 371</b>   |  | ATTORNEY'S DOCKET NUMBER<br>4633-0184PUS1<br>U.S. APPLICATION NO. (Kind of filing, see 37 CFR 1.5)<br><b>10/394602</b> |
| INTERNATIONAL APPLICATION NO.<br>PCT/JP2005/005588  | INTERNATIONAL FILING DATE<br>25 March 2005 | PRIORITY DATE CLAIMED<br>31 March 2004   |
| TITLE OF INVENTION<br>HEAT EXCHANGER  |  |  |
| APPLICANT(S) FOR DO/EO/US<br>Shuji IKEGAMI and Hirohiko MATSUSHITA  |  |  |
| Applicant herewith submits to the United States Designated/Elected Office (DO/EO/US) the following items and other information:   |  |  |
| 1. <input checked="" type="checkbox"/> This is a <b>FIRST</b> submission of items concerning a submission under 35 U.S.C. 371.<br>2. <input type="checkbox"/> This is a <b>SECOND</b> or <b>SUBSEQUENT</b> submission of items concerning a submission under 35 U.S.C. 371.<br>3. <input checked="" type="checkbox"/> This is an express request to begin national examination procedures (35 U.S.C. 371(f)). The submission must include items (5), (6), (9) and (21) indicated below.<br>4. <input type="checkbox"/> The US has been elected (Article 31).<br>5. <input checked="" type="checkbox"/> A copy of the International Application as filed (35 U.S.C. 371 (c)(2))<br>a. <input type="checkbox"/> is attached hereto (required only if not communicated by the International Bureau).<br>b. <input checked="" type="checkbox"/> has been communicated by the International Bureau (WO 2005/098340 A1)<br>c. <input type="checkbox"/> is not required, as the application was filed in the United States Receiving Office (RO/US).<br>6. <input checked="" type="checkbox"/> An English language translation of the International Application as filed (35 U.S.C. 371(c)(2)).<br>a. <input checked="" type="checkbox"/> is attached hereto.<br>b. <input type="checkbox"/> has been previously submitted under 35 U.S.C. 154(d)(4).<br>7. <input checked="" type="checkbox"/> Amendments to the claims of the International Application under PCT Article 19 (35 U.S.C. 371(c)(3))<br>a. <input type="checkbox"/> are attached hereto (required only if not communicated by the International Bureau).<br>b. <input type="checkbox"/> have been communicated by the International Bureau.<br>c. <input type="checkbox"/> have not been made; however, the time limit for making such amendments has NOT expired.<br>d. <input checked="" type="checkbox"/> have not been made and will not be made.<br>8. <input type="checkbox"/> An English language translation of the amendments to the claims under PCT Article 19 (35 U.S.C. 371(c)(3)).<br>9. <input checked="" type="checkbox"/> An oath or declaration of the inventor(s) (35 U.S.C. 371(c)(4)).<br>10. <input type="checkbox"/> An English language translation of the annexes of the International Preliminary Examination Report under PCT Article 36 (35 U.S.C. 371(c)(5)).<br><b>Items 11 to 20 below concern document(s) or information included:</b><br>11. <input checked="" type="checkbox"/> An Information Disclosure Statement under 37 CFR 1.97 and 1.98.<br>12. <input checked="" type="checkbox"/> An assignment document for recording. A separate cover sheet in compliance with 37 CFR 3.28 and 3.31 is included.<br>13. <input type="checkbox"/> A preliminary amendment.<br>14. <input type="checkbox"/> An Application Data Sheet under 37 CFR 1.76.<br>15. <input type="checkbox"/> A substitute specification.<br>16. <input type="checkbox"/> A power of attorney and/or change of address letter.<br>17. <input type="checkbox"/> A computer-readable form of the sequence listing in accordance with PCT Rule 13ter.2 and 37 CFR 1.821 – 1.825.<br>18. <input type="checkbox"/> A second copy of the published International Application under 35 U.S.C. 154(d)(4).<br>19. <input type="checkbox"/> A second copy of the English language translation of the international application under 35 U.S.C. 154(d)(4). |  |  |

IAP5 Rec'd PCT/PTO 28 SEP 2006

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|   |              |  |            |  |                     |
|---|--------------|--|------------|--|---------------------|
| U.S. APPLICATION NO. <b>10/394602</b><br><small>(If PCT filing, see 37 CFR 1.53)</small>  |              | INTERNATIONAL APPLICATION NO.<br><b>PCT/JP2005/005588</b>                        |            | ATTORNEY'S DOCKET NUMBER<br><b>4633-0184PUS1</b> |                     |
| 20. <input checked="" type="checkbox"/> Other items or information: Return Receipt Postcard<br>PCT/IB/304 & PCT/IB/308<br>PCT/ISA/210<br>Seven (7) Sheets of Formal Drawings  |              |  |            |  |                     |
| The following fees have been submitted  |              |  |            | <b>CALCULATIONS</b>                              | <b>PTO USE ONLY</b> |
| 21. <input checked="" type="checkbox"/> Basic national fee (37 CFR 1.492(a)) ..... \$300  |              |  |            | \$ 300.00  |                     |
| 22. <input checked="" type="checkbox"/> Examination fee (37 CFR 1.492(c))<br>If the written opinion prepared by ISA/US or the international preliminary examination report<br>prepared by IPEA/US indicates all claims satisfy provisions of PCT Article 33(1)-(4).....\$0<br>All other situations .....\$200   |              |  |            | \$ 200.00  |                     |
| 23. <input checked="" type="checkbox"/> Search fee (37 CFR 1.492(b))<br>If the written opinion of the ISA/US or the international preliminary examination report prepared by<br>IPEA/US indicates all claims satisfy provisions of PCT Article 33(1)-(4) .....\$0<br>Search fee (37 CFR 1.445(a)(2)) has been paid on the international application to the USPTO as an<br>International Searching Authority .....\$100<br>International Search Report prepared by an ISA other than the US and provided to the Office or<br>previously communicated to the US by the IB.....\$400<br>All other situations.....\$500 |              |  |            | \$ 400.00  |                     |
| <b>TOTAL OF 21, 22 and 23 =</b>   |              |  |            | <b>\$ 900.00</b>                                 |                     |
| <input type="checkbox"/> Additional fee for specification and drawings filed in paper over 100 sheets (excluding<br>sequence listing in compliance with 37 CFR 1.821(c) or (e) or computer program listing in an<br>electronic medium) (37 CFR 1.492(j)).<br>The fee is \$250 for each additional 50 sheets of paper or fraction thereof.   |              |  |            |  |                     |
| Total Sheets  | Extra Sheets | Number of each additional 50 or fraction<br>thereof (round up to a whole number) | RATE       |  |                     |
| 27 - 100 =  | /50 =        |  | x \$250.00 | \$   |                     |
| Surcharge of \$130 for furnishing any of the search fee, examination fee, or the oath or declaration<br>after the date of commencement of the national stage (37 CFR 1.492(h)).   |              |  |            | \$   |                     |
| CLAIMS  | NUMBER FILED | NUMBER EXTRA   | RATE       |  |                     |
| Total claims  | 12 - 20 =    | 0  | x 50.00    | 0.00   |                     |
| Independent claims  | 1 - 3 =      | 0  | x 200.00   | 0.00   |                     |
| MULTIPLE DEPENDENT CLAIM(S) (if applicable)   |              |  | + 360.00   | 360.00   |                     |
| <b>TOTAL OF ABOVE CALCULATIONS =</b>  |              |  |            | <b>\$ 1,260.00</b>                               |                     |
| <input type="checkbox"/> Applicant claims small entity status. See 37 CFR 1.27. Fees above are reduced by 1/2.  |              |  |            |  |                     |
| <b>SUBTOTAL =</b>   |              |  |            | <b>\$ 1,260.00</b>                               |                     |
| Processing fee of \$130.00 for furnishing the English translation later than 30 months from the earliest<br>claimed priority date (37 CFR 1.492(i)).  |              |  |            | \$   |                     |
| <b>TOTAL NATIONAL FEE =</b>   |              |  |            | <b>\$ 1,260.00</b>                               |                     |
| Fee for recording the enclosed assignment (37 CFR 1.21(h)). The assignment must be accompanied<br>by an appropriate cover sheet (37 CFR 3.28, 3.31). \$40.00 per property   |              |  |            | \$ 40.00   |                     |
| <b>TOTAL FEES ENCLOSED =</b>  |              |  |            | <b>\$ 1,300.00</b>                               |                     |
| Amount to be refunded:  |              |  |            | \$   |                     |
| Amount to be charged  |              |  |            | \$   |                     |

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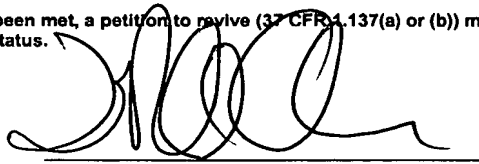
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- a. ☒ A check in the amount of \$ 1,300.00 to cover the above fees is enclosed.
- b. ☐ Please charge my Deposit Account No. 02-2448 in the amount of \$ \_\_\_\_\_ to cover the above fees.  
A duplicate copy of this sheet is enclosed.
- c. ☒ The Commissioner is hereby authorized to charge any additional fees which may be required, or credit any overpayment to Deposit Account No. 02-2448. A duplicate copy of this sheet is enclosed.
- d. ☐ Fees are to be charged to a credit card. **WARNING:** Information on this form may become public. **Credit card information should not be included on this form.** Provide credit card information and authorization on PTO-2038

**NOTE:** Where an appropriate time limit under 37 CFR 1.495 has not been met, a petition to revive (37 CFR 1.137(a) or (b)) must be filed and granted to restore the International Application to pending status.

SEND ALL CORRESPONDENCE TO:

  
SIGNATURE

Date: September 28, 2006

D. Richard Anderson  
NAME

CUSTOMER NUMBER: 02292

40,439  
REGISTRATION NUMBER